

IN THE CLAIMS

1-19. (Canceled).

20. (Currently Amended) A compile method for generating an object program file from a source program having a plurality of procedures, comprising the steps of:

by regarding procedures of said source program as source-program compile units, compiling said source program on a procedure basis to generate said plurality of object-program compile units;

in said object program file, storing said plurality of object-program compile units and said plurality of source-program compile units respectively associated with one another in said object program file, said plurality of source-program compile units being used to update said object program file on an object-program compile unit basis;

in addition to storing said plurality of object-program compile units and said plurality of source-program compile units, storing analysis information obtained by header

analysis ~~syntax analysis~~ of said source-program in said object program file;

after making a change in said source program,
analyzing syntax of said source program;

comparing said analysis information obtained by said header ~~syntax~~ analysis with said analysis information stored in said object program file;

if both the analysis information do not coincide,
compiling a plurality of source-program compile units constituting said change source program, to generate a plurality of new object-program compile units; and

updating said plurality of source-program compile units stored in said object program file so as to be the same as said plurality of source-program compile units constituting said changed source program, updating said plurality of object-program compile units stored in said object program file so as to be the same as said new object-program compile units, and updating said analysis information stored in said object program file so as to be the same as the analysis information thus obtained,

wherein said analysis information is a version of a compiler used for compilation.

21. (Currently Amended) A compiler for generating an object program file from a source program having a plurality of procedures, comprising;

an input part for inputting said source program;

a processing part for, by regarding procedure of said source program as source-program compile units, compiling said source program on a procedure basis ~~procedures on a procedure basis~~ to generate a plurality of object-program compile units;

a processing part for storing said plurality of object-program compile units and said plurality of source-program compile units respectively associated with one another, said plurality of source-program compile units being used to update said object-program file on an object-program compile unit basis;

a processing part, in addition to storing said plurality of object-program compile units and said plurality of source-program compile units, storing analysis information

resulting from header ~~syntax~~ analysis of a header ~~said source~~
~~program~~ in said object program file;

a processing part for analyzing syntax of said
source program after changes are made in said source program;

a processing part for comparing analysis information
obtained by said header ~~syntax~~-analysis with said analysis
information stored in said object program file;

a processing part for, if both the analysis
information do not coincide, compiling a plurality of source-
program compile units constituting said changed source
program, to generate a plurality of new object-program compile
units;

a processing part for updating said plurality of
source-program compile units stored in said object program
file so as to be the same as said plurality of source-program
compile units constituting said changed source program, and
updating said plurality of object-program compile units stored
in said object program file so as to be the same as said
plurality of new object-program compile units, and updating
said analysis information stored in said object program file

so as to be the same as said analysis information thus obtained; and

an output part for outputting said object program file,

wherein said analysis information is a version of a compiler used for compilation.

22. (Currently Amended) A compile method for generating an object program file from a source program having a plurality of procedures, comprising the steps of:

by regarding procedures of said source program as source-program compile units, compiling said source program on a procedure basis to generate said plurality of object-program compile units;

in said object program file, storing said plurality of object-program compile units and said plurality of source-program compile units respectively associated with one another in said object program file, said plurality of source-program compile units being used to update said object program file on an object-program compile unit basis;

in addition to storing said plurality of object-program compile units and said plurality of source-program compile units, storing analysis information obtained by header syntax analysis of a header ~~said source program~~ in said object program file;

after making a change in said source program, analyzing syntax of said source program;

comparing said analysis information obtained by said header ~~syntax~~ analysis with said analysis information stored in said object program file;

if both the analysis information do not coincide, compiling a plurality of source-program compile units constituting said changed source program to generate a plurality of new object-program compile units; and

updating said plurality of source-program compile units stored in said object program file so as to be the same as said plurality of source-program compile units constituting said changed source program, updating said plurality of object-program compile units stored in said object program file so as to be the same as said new object-program compile units, and updating said analysis information stored in said

object program file so as to be the same as the analysis information thus obtained,

wherein said analysis information is an optimization level of a compiler used for compilation.

23. (Currently Amended) A compiler for generating an object program file from a source program having a plurality of procedures, comprising;

an input part for inputting said source program;

a processing part for, by regarding procedures of said source program as source-program compile units, compiling said source program procedures on a procedure basis to generate a plurality of object-program compile units;

a processing part for storing said plurality of said plurality or object-program compile units and said plurality of source-program compile units respectively associated with one another, said plurality of source-program compile units being used to update said object program file on an object-program compile unit basis;

a processing part, in addition to storing said plurality of object-program compile units and said plurality

of source-program compile units, storing analysis information resulting from header ~~syntax~~-analysis of said header ~~source~~ ~~program~~-in said object program file;

a processing part for analyzing syntax of said source program after changes are made in said source program;

a processing part for comparing analysis information obtained by said header ~~syntax~~-analysis with said analysis information stored in said object program file;

a processing part for, if both the analysis information do not coincide, compiling a plurality of source-program compile units constituting said changed source program to generate a plurality of new object-program compile units;

a processing part for updating said plurality of source-program compile units stored in said object program file so as to be the same as said plurality of source-program compile units constituting said changed source program, and updating said plurality of object-program compile units stored in said object program file so as to be the same as said plurality of new object-program compile units, and updating said analysis information stored in said object program file

so as to be the same as said analysis information obtained;
and

an output part for outputting said object program
file,

wherein said analysis information is an optimization
level of a compiler used for compilation.

24. (Currently Amended) A compile program executing a
compile method for generating an object program file from a
source program having a plurality of procedures on a computer,
comprising the steps of:

by regarding procedures of said source program as
source-program compile units, compiling said source program on
a procedure basis to generate said plurality of object-program
compile units;

in said object program file, storing said plurality
of object-program compile units and said plurality of source-
program compile units respectively associated with one another
in said object program file, said plurality of source-program
compile units being used to update said object program file on
an object-program compile unit basis;

in addition to storing said plurality of object-program compile units and said plurality of source-program compile units, storing analysis information obtained by header syntax analysis of a header ~~said source-program~~ in said object program file;

after making a change in said source program, analyzing syntax of said source program;

comparing said analysis information obtained by said header ~~syntax~~ analysis with said analysis information stored in said object program file;

if both the analysis information do not coincide, compiling a plurality of source-program compile units constituting said change source program, to generate a plurality of new object-program compile units; and

updating said plurality of source-program compile units stored in said object program file so as to be the same as said plurality of source-program compile units constituting said changed source program, updating said plurality of object-program compile units stored in said object program file so as to be the same as said new object-program compile units, and updating said analysis information stored in said

object program file so as to be the same as the analysis information thus obtained,

wherein said analysis information is a version of a compiler used for compilation.

25. (Currently Amended) A compile program executing a compile method for generating an object program file from a source program having a plurality of procedures on a computer, comprising the steps of:

by regarding procedures of said source program as source-program compile units, compiling said source program on a procedure basis to generate said plurality of object-program compile units;

in said object program file, storing said plurality of object-program compile units and said plurality of source-program compile units respectively associated with one another in said object program file, said plurality of source-program compile units being used to update said object program file on an object-program compile unit basis;

in addition to storing said plurality of object-program compile units and said plurality of source-program

compile units, storing analysis information obtained by header
~~syntax analysis of a header said source program in~~ said object
program file;

after making a change in said source program,
analyzing syntax of said source program;

comparing said analysis information obtained by said
header ~~syntax~~ analysis with said analysis information stored
in said object program file;

if both the analysis information do not coincide,
compiling a plurality of source-program compile units
constituting said changed source program to generate a
plurality of new object-program compile units; and

updating said plurality of source-program compile
units stored in said object program file so as to be the same
as said plurality of source-program compile units constituting
said changed source program, updating said plurality of
object-program compile units stored in said object program
file so as to be the same as said new object-program compile
units, and updating said analysis information stored in said
object program file so as to be the same as the analysis
information thus obtained,

wherein said analysis information is an optimization level of a compiler used for compilation.